

AMENDMENTS TO THE SPECIFICATION

(1) Please replace the title and the first paragraph at page 1 with the following corrected title:

DIE MODULE FOR A CROSSHEAD EXTRUSION SYSTEM

(2) Page 1, before line 3, insert the following heading and paragraph therefor:

CROSS REFERENCE TO RELATED APPLICATIONS:

This application is a division of U.S. Serial No. 09/923,974, filed August 7, 2001.

(3) Replace the first full paragraph appearing at page 3 with the following corrected paragraph:

It is also known in the art that it is extremely difficult to establish an even and balanced flow of molten material around the circumference of a wire, mandrel or tube. For example, it is known that conventional crosshead extrusion methods pose several inherent problems such as lengthy "set-up" time which is the time spent adjusting the extruder for a desired circumferential size and uniform wall gauge concentricity. After the adjustments are made and remade several times and the "set-up" is finally complete, the material being extruded from "set-up" mode to "full run" mode has, typically, become hotter on the inside, or extruded side, of the crosshead, thus causing concentricity of the tubular structure to be compromised ~~comprised~~. In addition, the overheated plastic or rubber material frequently becomes discolored and exhibits other undesirable characteristics. Furthermore, it is known that splitting and re-blending ~~reblending~~ of the molten material can cause the molten material to blend together unevenly forming undesirable weld or joint lines in the finished product. Accordingly, there is a need for an extrusion system which overcomes the inadequacies and undesirable characteristics of the prior art extrusion systems.

(4) Replace the first full paragraph appearing at page 5 with the following corrected paragraph:

Turning to the drawings, Fig. 1 illustrates a cross-sectional extrusion system of the present invention. The extrusion system 10 comprises a housing 12 having a

tapered interior wall surface 14, the circumference of the interior wall surface 14 being smaller in the front of the housing 12 than in the rear of the housing 12. The housing 12 is adapted with a threaded surface 28 at the front of the housing 12 to threadedly secure a die head (now shown) to the housing 12. As shown in Fig. 1, an extrusion module 18 is placed in the interior of the housing 12 such that the frusto-conical exterior surfaces 22 of the module 18 mates with the tapered interior wall surface 14 of the housing 12. The module 18 further includes wall portions 46 extending from the frusto-conical exterior surfaces 22 of the module 18 to a tubular bore 32 having uniform inner and outer circumferential surfaces. The tubular bore 32 extends axially ~~The extrusion module 12 has a tubular bore 32 with a uniform circumference extending through~~ module 12 for transporting a wire, mandrel, or tube (not shown) in accordance with the present invention. The module 18 is secured in the housing 12 using a nut (not shown) which is threadedly locked onto the housing 12 using threaded surface 26.

(5) Replace the paragraph bridging pages 5 and 6 with the following corrected paragraph:

Molten material such as plastic and/or vulcanized or unvulcanized rubber is delivered under high pressure and temperature to the interior of the housing 12 through conduit 40. The pressure and temperature employed are those typically used in conventional extrusion systems for similar material plastic or rubber materials. The molten material is distributed by diverter 38 in the fixed center die module through channels 42 between raised surfaces 24 to uniformly divide the molten material into two substantially equal parts or equal flow. The two separate and equal parts or flow of molten material continues to be distributed forward through the channels 44 wherein the two equal parts or flow of molten material are eventually uniformly divided into four equal parts of molten material. Finally, the four separate and equal parts of molten material are ~~is~~ directed to tubular bore 32 where, in one aspect of the invention, the four separate and equal parts of molten material are ~~it is~~ evenly distributed and coated onto a cylindrical body such as a hose, a wire or a mandrel, to provide a tubular structure of molten material having a predetermined cross-section and uniform wall gauge concentricity. In another aspect of the invention, the four separate and equal parts of molten material ~~is~~ ~~may be~~ employed to provide an unsupported hos . In a preferred aspect of the invention, one or more temperature controlling zones 20 are employed in

the housing 12 to aid in controlling the wall gauge concentricity of the extruded material. Most preferably, the housing 12 is constructed with dual temperature controlling zones, and the temperature of the temperature controlling medium is monitored and controlled to assure of proper temperature.